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William F. Caton
Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

OCT 25 1996

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Re: COMSAT Corporation
Petition for Partial Relief from the Current Regulatory
Treatment of COMSAT World Systems' Video and Audio
Services (RM-7913)

Dear Mr. Caton:

By its undersigned attorney and in accordance with the Commission's August 14, 1996 Order in the above-referenced proceeding, COMSAT Corporation hereby files its Petition for Partial Relief with respect to its audio and video services. This submission includes an economic study conducted by Dr. Hendrik S. Houthakker, of Harvard University, and the Brattle Group which supports the relief requested (the "1996 Brattle Report").

Because the Commission has delegated to the Chiefs of the International and Common Carrier Bureaus the authority to act on this Petition, copies of the document and the 1996 Brattle Report are being delivered to them under separate cover.

Please date-stamp the enclosed duplicate upon receipt and return it via the messenger for our records.

Should any questions arise concerning this submission, kindly contact the undersigned.

Respectfully submitted,

Rosemary C. Harold

Enclosures

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Before the
FEDERAL COMMUNICATIONS COMMISSION
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OCT 25 1996

In the Matter of

COMSAT Corporation

Petition for Partial Relief from the Current Regulatory Treatment of COMSAT World Systems' Video and Audio Services

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

RM-7913

To: The Chief, International Bureau
The Chief, Common Carrier Bureau

PETITION OF COMSAT CORPORATION FOR PARTIAL RELIEF

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October 25, 1996

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Before the
FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of)	
)	
COMSAT Corporation)	RM-7913
)	
Petition for Partial Relief from)	
the Current Regulatory Treatment)	
of COMSAT World Systems')	
Video and Audio Services)	
)	

To: The Chief, International Bureau
 The Chief, Common Carrier Bureau

**PETITION OF COMSAT CORPORATION
FOR PARTIAL RELIEF**

On August 15, 1996, the Federal Communications Commission (the "Commission" or "FCC") released a decision finding that the international marketplace has become sufficiently competitive to waive certain tariffing requirements applicable to switched voice and private line services offered by COMSAT Corporation ("COMSAT") through its COMSAT World Systems business unit. *Order in the Matter of COMSAT Corporation's Petition for Partial Relief*, FCC 96-349 (adopted August 14, 1996) ("*Relief Order*"). As a result, COMSAT is now afforded "streamlined" tariff relief -- *e.g.*, authority to file tariffs on 14 days' notice, with a presumption of lawfulness -- for its switched voice and private line services.¹

¹ The relief is subject to the requirement that COMSAT file support material showing that service availability and rates associated with "thin routes" suffer no negative effects.

At the time the *Relief Order* was issued, the Commission was not prepared, on the record then before it, to grant the same treatment for COMSAT's video satellite services. However, the FCC recognized that competition in that sphere was evolving so rapidly that more current facts might justify further regulatory streamlining. *Relief Order* at ¶ 34. The Commission therefore invited COMSAT to submit new evidence developed "since the close of th[e] record" in 1994 to demonstrate that COMSAT lacks market power in the provision of international satellite space segment video services, and delegated to the International and Common Carrier Bureaus authority to grant COMSAT immediate relief from the full tariffing requirements of Sections 61.38 and 61.58 of the Commission's Rules for video services. *Id.* at ¶ 34 & n.73.

In response to that invitation, COMSAT hereby requests that the FCC grant streamlined tariff treatment for the company's international video services.² To support its Petition, COMSAT submits herewith an updated market analysis prepared by Dr. Hendrik Houthakker of Harvard University and The Brattle Group (the "1996 Brattle Report"), which focuses on developments in the international video service market since 1994.

SUMMARY

The 1996 Brattle Report states the relevant facts plainly and concludes, without caveat, that competition in the international video (and related audio) facilities marketplace has

² In the *Relief Order*, the Commission treated COMSAT's 1994 petition as a waiver request. Similar treatment would be appropriate in this instance.

increased dramatically while COMSAT's market position has declined. Rival satellite system operators such as PanAmSat have launched facilities that now provide full global coverage and collectively, unhindered by tariff regulation,³ have captured all of the net growth in the transoceanic video marketplace since 1994. These developments have left COMSAT -- crippled in part by outdated regulatory burdens -- with falling market shares and an inability to compete vigorously for customers.

This trend is being exacerbated by other changes, including the entry of new U.S.-based international facilities competitors now that domsats have been unleashed by the Commission's so-called *DISCO-I* decision.⁴ Furthermore, COMSAT's rivals are growing larger and stronger, as evidenced by the recently announced acquisitions of PanAmSat by Hughes and AT&T Skynet by Loral.⁵ The PanAmSat/Hughes transaction, in particular, will

³ Indeed, competitors in the international video marketplace such as PanAmSat, Orion, and Columbia are treated as non-common carriers subject to no tariff regulation at all. This treatment was predicated in large measure by restrictions imposed on separate satellite systems for interconnection to the public-switched telephone network. Those restrictions expire in totality at the end of 1996. See, e.g., *Permissible Services of U.S.-Licensed International Communications Satellite Systems Separate From the International Telecommunications Satellite Organization*, 7 FCC Rcd. 2313 (1994). In addition, domestic satellite providers of video services -- such as Hughes -- are similarly treated as non-common carriers. And even *foreign-affiliated* dominant carriers are subject to less burdensome tariff regulation than COMSAT, as such carriers may file tariffs on 14 days' notice and without cost support. See *Market Entry and Regulation of Foreign-Affiliated Entities*, 11 FCC Rcd. 3873, ¶ 260 (1985).

⁴ *Amendment to the Commission's Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems*, 11 FCC Rcd. 2429 (1996) ("*DISCO-I*"); see also *Petition of COMSAT Corporation for Partial Reconsideration and Immediate Interim Relief*, IB Docket No. 95-41 (filed Apr. 11, 1996).

⁵ For example, Loral's purchase of AT&T Skynet will provide Loral with four satellites to jump-start its domestic and international satellite operations. The transaction also will be a critical step in Loral's strategy to evolve into a leading operator of satellite networks. In late

combine the largest domestic video satellite operator with a global international satellite system.⁶

Under the FCC's recent precedents (including the finding that AT&T is non-dominant with respect to international services), the facts presented in the 1996 Brattle Report would easily support a finding that COMSAT is non-dominant in the international video marketplace.⁷ Given that the instant Petition seeks only regulatory relief of a more limited nature, the facts in the 1996 Brattle Report plainly justify expedited action on COMSAT's request for streamlined regulation of its video services.

(..continued)

1997, Loral plans to (1) launch the first of its 48 low-orbit Globalstar satellites for a worldwide telephony system, and (2) launch stationary Ku- and Ka-band satellites as part of its Cyberstar broadband data system. Skynet's 1997 revenues are expected to exceed \$145 million, with anticipated earnings of at least \$95 million. See John T. Mulqueen, "Satellite Communications Fly Once Again," *Communications Week* (Sept. 30, 1996); "Loral to Buy AT&T Skynet for \$712 Million in Bid to Focus on Space," *Satellite News* vol. 19, Issue 39 (Sept. 30, 1996).

⁶ Hughes already is the leading provider of commercial video, voice, and data satellite communications services in the United States. The combination of Hughes and PanAmSat will create a new company that will have 21 satellites in orbit by the end of 1998. PanAmSat and Hughes had combined 1995 revenues of over \$450 million (Hughes earned \$340 million, and PanAmSat earned \$116 million), predominantly from video satellite services. See "Hughes, PanAmSat Agree to Merge Satellite Service Operations," *EDGE* (Sept. 30, 1996); "Merger of Satellite Operators to Intensify Regional Competition," *EXCHANGE* vol. 8, No. 37 (Sept. 27, 1996).

⁷ *Order Declaring AT&T to Be Non-Dominant for International Service*, 3 Comm. Reg. (P & F) 111, FCC 96-209 (rel. May 14, 1996) ("*AT&T Non-Dominance Order*").

**THE FACTS JUSTIFY STREAMLINED TARIFFING
FOR COMSAT'S VIDEO SERVICES**

The Commission directed the Bureaus to act upon COMSAT's request for streamlined tariffing for its video services when the facts show that "the relevant geographic and product markets served by COMSAT are substantially competitive so as to warrant waiver of the specified tariffing requirements for COMSAT." *Id.* at ¶ 12.⁸ The FCC's analytical framework for determining the competitiveness of a market includes consideration of a firm's market shares as well as various market conditions, such as demand and supply elasticities and conditions of entry.

⁸ The 1996 Brattle Report is structured -- like the original 1994 report -- to reflect the geographic regions coincident with the point-to-multipoint transmission characteristics of satellite video broadcasting: (1) across the Atlantic to Europe, the Middle East, and Africa ("trans-Atlantic"); (2) across the Pacific to Asia, Australia, and the Pacific islands ("trans-Pacific"); and (3) intra-regional transmission between the United States and the Caribbean islands or the United States and Latin America ("Latin America"). The 1996 Brattle Report's adoption of a regional geographic analysis is consistent with the Commission's approach in the *AT&T Non-Dominance Order*, in which the agency declined to pursue a "route-specific market analysis" in the absence of "persuasive evidence that the market attributes of each U.S. international route are so different" from one another. *AT&T Non-Dominance Order* at ¶¶ 32-33. Indeed, the Commission in that proceeding used "AT&T's market position on a *world-wide basis* as a surrogate for route-by-route analysis for market share, demand elasticity, supply elasticity," and so forth. *Id.* at ¶ 32 (emphasis added).

Here, the 1996 Brattle Report takes a more conservative approach: "The point-to-multipoint nature of many video services, and the operational flexibility that satellites offer, call for a regional delineation of geographic submarkets." 1996 Brattle Report at A-2. And as shown below, COMSAT's market shares -- whether aggregated globally or analyzed by region -- are well below the 60% world-wide market share held by AT&T when it was declared non-dominant. In any event, given that no U.S.-licensed satellite system is required to file traffic statistics on a country-by-country basis, it is unclear how COMSAT, the Commission, or any other participant in this proceeding might obtain sufficient and reliable facts to meet such an analytical standard.

With respect to the international video services market, the Commission sought further evidence on whether U.S. satellite systems competing with COMSAT "in terms of connectivity and transponder capacity" can rival the INTELSAT system,⁹ and whether competition exists in the provision of occasional-use video services.¹⁰ In response to this inquiry, COMSAT hereby submits the updated 1996 Brattle Report, attached to this pleading as Exhibit I, to demonstrate that notable changes have occurred in the international satellite video services marketplace over the last two years -- and that these changes have a direct bearing on the issues raised in the *Relief Order*. Because the facts as documented in the 1996 Brattle Report speak for themselves, the Report's principal conclusions are simply summarized below in a manner directly responsive to the Commission's specified concerns regarding international video services. Details on each point may be found in the cited pages of the 1996 Brattle Report:

⁹ The Commission's statement here seems erroneously to equate COMSAT with INTELSAT. COMSAT does not have full ownership or control of the INTELSAT system, while PanAmSat controls its entire system. Moreover, COMSAT generally cannot compete with PanAmSat or others in the sale of satellite capacity for services in the Indian Ocean Region, since U.S. earth stations cannot see INTELSAT satellites in that part of the orbital arc. Finally, unlike the PanAmSat satellite capacity, the majority of the satellite capacity that COMSAT does make available to customers is used for voice and data traffic, not video.

¹⁰ The Commission did not express concern on the basis of other factors that it typically assesses in analyzing market power -- such as the sophistication of customers who can and do switch transmission facilities for reasons of price, etc. Accordingly, these factors presumptively support the requested relief. The 1996 Brattle Report shows, for example, that COMSAT's video customers are highly sophisticated, with vastly greater size and financial resources than COMSAT. Furthermore, these customers are enjoying the tangible benefits of competition in the international video marketplace; COMSAT has continued to offer more service options and competitive prices during the last two years. 1996 Brattle Report at 29-31.

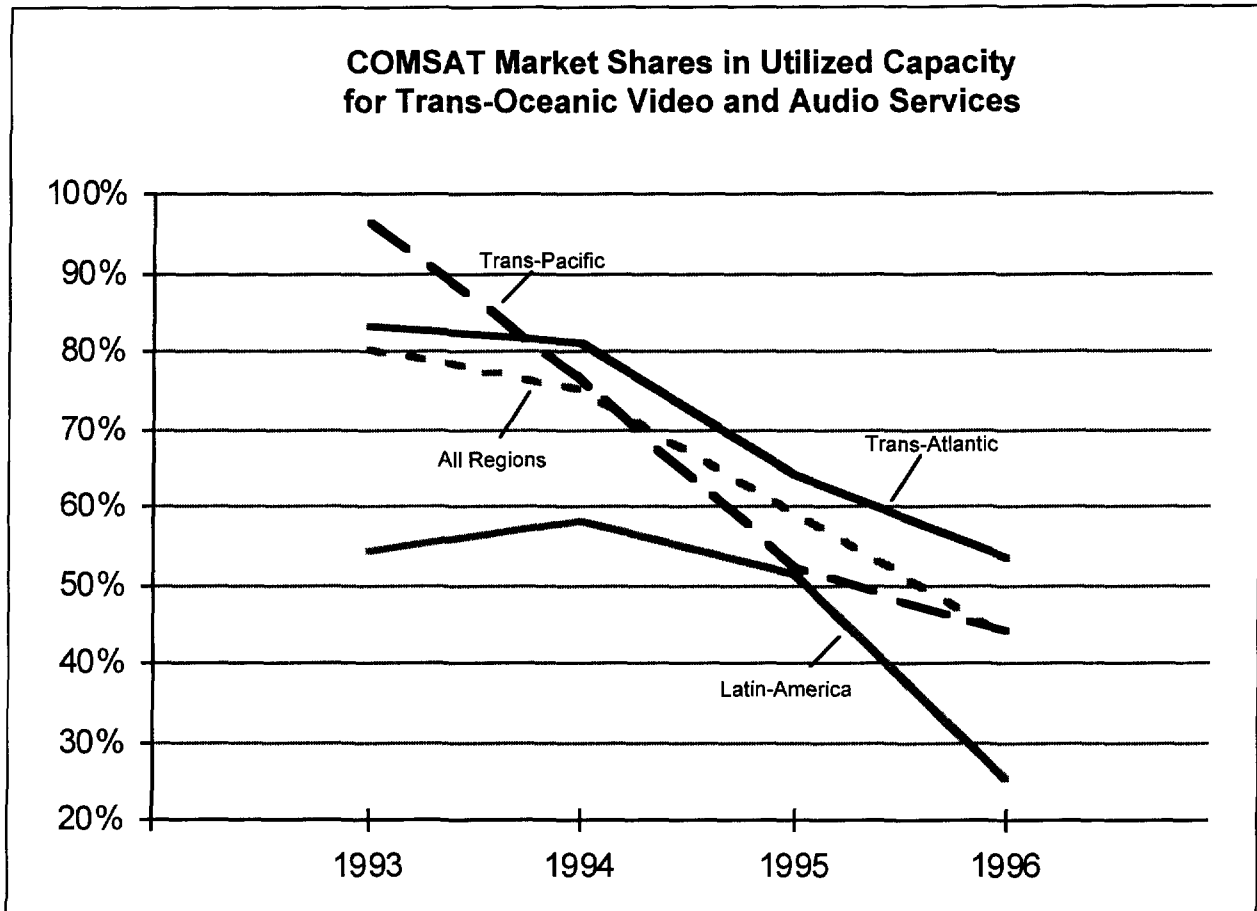
- **First, rival satellite systems have proven themselves to be fully effective competitors on a global basis, as demonstrated by the dramatic decline in COMSAT's share of the total transoceanic video services market -- including both occasional-use and short-term video services. See 1996 Brattle Report at 5-21.**
 - Most prominently, PanAmSat added facilities and achieved global coverage even *before* its acquisition by Hughes, the world's largest private satellite system owner. See *id.* at 6-7.
 - With four of its own satellites in operation around the world, PanAmSat more than doubled its video revenues in each of the last two years. It now anticipates earning \$180 million in video revenues this year, more than four times the expected \$41 million video revenues of COMSAT. *Id.*
 - Other satellite systems compete for both full-time and occasional-use video traffic to and from the United States, including -- since the Commission's elimination of domestic-only service restrictions in the so-called *DISCO-I* decision -- U.S. domsats. See *id.* at 7-10.
 - Indeed, more than a year ago PanAmSat observed that “[t]he market for international satellite services is *highly competitive*. PanAmSat, Orion, Columbia, U.S. domestic satellites (transborder), INTELSAT, Hispasat, Eutelsat, Arabsat, Astra, Apstar, AsiaSat, Palapa[,] and other regional and domestic satellite systems all presently provide international satellite services, resulting in an *abundance of capacity and competitive rates* for all services but switched services.” See *id.* at 3 (quoting comments of PanAmSat Corporation submitted in the *DISCO-I* proceeding).
 - As a result of the entry of new competitors and the launch of new facilities, a significant amount of unutilized capacity on rival systems is available to compete with COMSAT. Unutilized capacity on competing satellite systems could now accommodate *all* of COMSAT's video transponder leases for service over the Atlantic or Pacific Oceans – and still leave room to accommodate new growth in demand.¹¹ See *id.* at 23-24.

¹¹ Thus, the high degree of supply elasticity in the transoceanic satellite facilities market renders superfluous the degree to which fiber optic cable is a substitute for international satellite video transmissions. Nevertheless, fiber optic cable has become a viable alternative for various video transmissions – including occasional-use video services. See 1996 Brattle Report at 10-11. Vyvx, a pioneer in fiber video transmission, has introduced occasional-use video transmission between the fiber video networks in North American and the United Kingdom, and the company plans to introduce fiber video service from North American to

- Existing and new transoceanic competitors are adding a large number of new satellites during the next two to three years. Between 1996 and 2000, these competitors expect to launch at least 155 geostationary satellites world-wide. *See id.* at 12-15.
- As a result of these competing satellite systems, COMSAT's share of the total transoceanic video services market has dropped to levels even lower than anticipated in the original Brattle Report. *See id.* at 16-21.
- For example, even under a conservative measure, COMSAT's share of the total number of satellite transponders utilized for video services to and from the United States has declined in three years from approximately 80 percent to an average of less than 45 percent. *See id.* at 17.
- As shown below, analysis by major geographic region shows that COMSAT's share of video traffic to and from the U.S. has fallen to 25 percent for Latin American routes; 53 percent for trans-Atlantic routes; and 44 percent for trans-Pacific routes. *See also id.* at 17, 20-21.

(..continued)

Japan and Continental Europe. AT&T already offers international 45 Mbps private line service that provides sufficient transmission capacity to carry up to three broadcast-quality video transmissions. These alternatives are likely to continue to attract international video transmission customers.



Source: Brattle Report, Figure 4.

- Similarly, COMSAT's full-time video revenues have stagnated despite exponential growth in the overall market. In fact, competing satellite systems have absorbed all of the market growth while COMSAT has been struggling to retain the video volume it achieved three years ago. *See id.* at 21.
- This "inability to participate in growth and the rapid decline in market share appears to be unprecedented in the telecommunications industry." *Id.* at 21.
- **Second, the 1996 Brattle Report provides considerable evidence to show that substantial and effective competition exists in the occasional-use video market.** *See id.* at 31-34.

- Demand for occasional-use and short-term video service is a relatively small segment of overall video transmission needs. COMSAT's revenue from occasional-use services is a small portion of COMSAT's total video revenue and amounted only to \$5.5 million in 1995.¹² *Id.* at 31.
- In its filings with the SEC, PanAmSat states that it provides service to 110 countries and stresses its provision of full global coverage for occasional use video services. *See id.*
- Moreover, COMSAT's INTELSAT capacity -- as well as capacity on several separate satellite systems -- is resold on an occasional-use basis. *See id.* at 30-34.

The 1996 Brattle Report dispositively addresses the concerns raised in the *Relief Order* regarding the competitiveness of the video market. Moreover, it also analyzes other developments that have sharply increased competition in this market. As noted above, the two recently announced mergers in the satellite industry mean that the marketplace will be populated by large firms that have the financial resources to compete in both international and domestic markets and, as a result, are fully capable of providing "one-stop shopping" for a wide range of domestic and international services. For example, the acquisition of PanAmSat by Hughes will create a company that by 1998 will own 21 satellites world-wide and will be able to provide both domestic and international distribution of video programming, subject to *no* FCC tariff regulation!

¹² Stated differently, the FCC's current treatment of COMSAT's occasional-use video business equates a \$5.5 million revenue stream to domination of the much larger U.S. international satellite video services market generally. At a minimum, the occasional use submarket should not stand as a bar to streamlined tariff relief for COMSAT's other video services. *Cf. AT&T Non-Dominance Order*, 3 Comm. Reg. (P & F) 111 (AT&T's position as sole facilities-based provider of IMTS to four small foreign nations not deemed significant enough to prevent finding of non-dominance on global basis).

In contrast, COMSAT continues to face significant competitive handicaps when trying to compete in the international video services market. The tariff regulation at issue in this proceeding is one prominent example; COMSAT also faces other obstacles that constrain its ability to compete. These include INTELSAT's cumbersome matching-order process and the fact that COMSAT World Systems, limited by regulation to acting only as a space segment provider, cannot offer earth station access. Finally, COMSAT's flexibility is limited by its inability to provide both international and domestic service, which many customers find desirable. In contrast to customers of competing systems, COMSAT's customers must deal with geographic restrictions which force them to arrange with separate entities for domestic coverage. COMSAT remains the *only* U.S. satellite company subject to these geographic restrictions and to full dominant carrier tariff regulation.

For these reasons, COMSAT urges the Commission to consider the status of competition in the video services market as set forth in the 1996 Brattle Report. The changes documented therein justify the granting of a waiver of the formal tariffing requirements so that COMSAT's customers may obtain competitive video services on 14 days' notice, with a presumption of lawfulness, and without detailed cost support.

CONCLUSION

COMSAT submits the 1996 Brattle Report to support its request for streamlined tariff treatment of its video satellite services. Swift action on this Petition -- as contemplated by the Commission's decision to delegate authority on this particular matter to the Bureaus -- is especially appropriate in light of the rapidly changing conditions in today's satellite

marketplace. The fact that none of COMSAT's competitors is subject to any form of Title II regulation dictates that the decade-old treatment of COMSAT be reexamined to better reflect today's highly competitive marketplace for video satellite services.

Respectfully submitted,

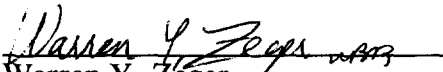
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**COMPETITION IN THE MARKET FOR
TRANSOCEANIC VIDEO SERVICES
TO AND FROM THE U.S.**

Prepared for

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Bethesda, Maryland

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October 24, 1996

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ABOUT THE AUTHORS

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I. INTRODUCTION AND SUMMARY

Over two years ago, our study, *Competition in the Market for Trans-Oceanic Facilities-Based Telecommunications Services* (the “1994 Study”), was filed with the Federal Communications Commission (the “Commission” or the “FCC”) in conjunction with a petition for partial regulatory relief by COMSAT World Systems (“Comsat”) for its switched voice, private line, and video and audio services.¹ In response to this 1994 filing, the Commission issued an Order granting Comsat streamlined tariff relief for its switched voice and private line services (subject to safeguards for “thin route” users).² In this Partial Relief Order, however, the Commission did not extend the same treatment to Comsat’s video (and associated audio) space segment services but recognized that “circumstances may change in the future that would change this conclusion,” and “delegate[d] to the International and Common Carrier Bureaus authority to act on any such request” so as to allow for more expeditious action.³ This report analyzes the significant changes in the marketplace for video services since the 1994 Study, and addresses issues raised by the Partial Relief Order regarding the market for video services.

Since the 1994 Study, competition in the market for transoceanic video services⁴ has continued to evolve rapidly. The most important change is the emergence and expansion of competing satellite systems as major providers of transoceanic video services. As a result, Comsat has seen an erosion of market share in total transoceanic video services that appears unprecedented in the telecommunications industry. Since 1993 (the last year of actual data

¹ Hendrik S. Houthakker and The Brattle Group, *Competition in the Market for Trans-Oceanic Facilities-Based Telecommunications Services*, filed with the Federal Communications Commission in the Matter of *Petition for Partial Relief From the Current Regulatory Treatment of COMSAT World Systems' Switched Voice, Private Line, and Video and Audio Services*, RM-7913, June 24, 1994.

² FCC 96-349, *In the Matter of Petition for Partial Relief From the Current Regulatory Treatment of COMSAT World Systems' Switched Voice, Private Line, and Video and Audio Services*, RM No. 7913, Order released August 15, 1996 (“Partial Relief Order”).

³ *Id.*, at ¶ 34 and n. 73.

⁴ Unless noted otherwise, “video services” includes occasional-use and short-term video service as well as associated audio service.

in the 1994 Study), Comsat's average market share of video services to and from the U.S. has dropped from approximately 80 percent to less than 45 percent today.⁵

Since the 1994 Study, competing satellite systems have greatly increased their market position. PanAmSat has now achieved full global coverage and its video revenues have more than doubled in each of the last two years. With a strong focus on video services, PanAmSat now has total video revenues that are more than four times those of Comsat. Other satellite systems competing for video service to or from the U.S. include Orion, Columbia, Intersputnik, the U.S. domestic, Mexican, Argentine, and Canadian satellite systems, as well as some European and Asian satellite systems (such as Hispasat, France Telecom, and JCSAT). U.S. domestic satellite systems, which have been allowed to provide transborder services on an incidental basis for years, have recently received blanket authority to provide international video service and have started to compete aggressively in video markets to and from the U.S. In addition to satellite transmission, some transoceanic occasional-use video services are now provided by fiber-optic cable.

Significantly, a number of additional demand and supply characteristics add competitive pressures that are not reflected in current market shares. Today's market for transoceanic video services to and from the U.S. is characterized by substantial supply and demand elasticities.⁶ A large number of new satellite systems with transoceanic video coverage have been announced, and the competitive pressure from the presubscription of planned satellite facilities remains high. Despite presubscription, total unutilized capacity of satellites directly competing for video services to and from the U.S. could now accommodate all of Comsat's video transponder leases. Furthermore, the convergence of market segments creates new

⁵ In comparison, the FCC recently reported that it took 12 years for AT&T's market share of interstate switched access (*i.e.*, switched voice service) to decline from somewhat more than 80 percent (in 1984) to approximately 55 percent (today). (See *Long Distance Market Shares, First Quarter 1996*, Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, July 1996, Figures 1 and 2).

⁶ The terms demand and supply elasticities—when used in this study—describe market conditions that are evidence for the absence of market power. High demand elasticities indicate customers' willingness and ability to switch among supplier in order to obtain price reductions or desired service features. High supply elasticities (*e.g.*, due to unutilized capacity of competing suppliers or the relative ease of entry) indicate the ability of a company's rivals to constrain that company's market behavior. See also *Competition in the Interstate Interexchange Marketplace*, 6 FCC Rcd 5880, 5881, 5894 (1991), at 5890, *modified*, 7 FCC Rcd 2677 (1992).

choices for video customers; Comsat faces significant handicaps relative to competing satellite systems; and Comsat's video customers are highly sophisticated, aware of their competitive options, are easily identified by Comsat's competitors, and have significant negotiating leverage. In fact, the annual turnover of Comsat video leases (also referred to as "churn rate") is approximately one third of its video business.

Even Comsat's competitors have recognized the high level of competition that exists today. For example, PanAmSat observed over a year ago that:

The market for international satellite services is *highly competitive*. PanAmSat, Orion, Columbia, U.S. domestic satellites (transborder), Intelsat, Hispasat, Eutelsat, Arabsat, Astra, Apstar, AsiaSat, Palapa and other regional and domestic satellite systems all presently provide international satellite services, resulting in an *abundance of capacity and competitive rates* for all services but switched services.⁷

Competitive pressure and declining market shares also are apparent in Comsat's financial condition. Since 1994, Comsat's full-time video revenues have stagnated despite rapid growth in the overall market for transoceanic video satellite transmission. Comsat's total video revenues for 1995 were less than \$45 million, of which occasional-use and short-term video services—a focus of discussion in the Partial Relief Order—accounted for only \$5.5 million. Given the rapid growth of competition over the last few years, Comsat is no longer the dominant carrier in video services and the regulatory burden imposed on Comsat—but not on its competitors—has lost its economic justification.

This report is organized as follows: Section II presents an overview of Comsat's competitors and new entrants; Section III discusses Comsat market shares of utilized capacity for video services to or from the U.S.; Section IV analyzes developments in supply and demand characteristics not reflected in market share analyses; Section V focuses on the competitive market environment in occasional-use and short-term video leases; and conclusions are presented in Section VI.

⁷ "Comments of PanAmSat Corporation," *Amendment of the Commission's Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems*, Federal Communications Commission, Docket No. 95-41, June 1995 (emphasis added). Note, however, that the FCC has found "substantial competition in the [switched voice and private line] space segment service market" (Partial Relief Order, ¶ 21).

II. COMSAT'S COMPETITORS AND NEW ENTRANTS

In the last two years, the market for transoceanic facilities-based communications services has experienced tremendous change. This is true even relative to the projections presented in the 1994 Study. The most significant developments involve the further expansion of separate satellite systems and the entry of new competitors into the video market. Indeed, the rapid construction, presubscription, and launch of new satellite systems already has been referred to with terms such as "Star Wars," "Space Race,"⁸ and "Oklahoma Land Rush."⁹ As of early 1996, 80 commercial geostationary communications satellites were on order. Between 1996 and 2000, a total of at least \$54 billion will be spent on new geostationary satellites and launches.¹⁰ Existing satellite competitors, fiber optics cables, and new satellite entrants are discussed below.

Existing Satellite Competitors

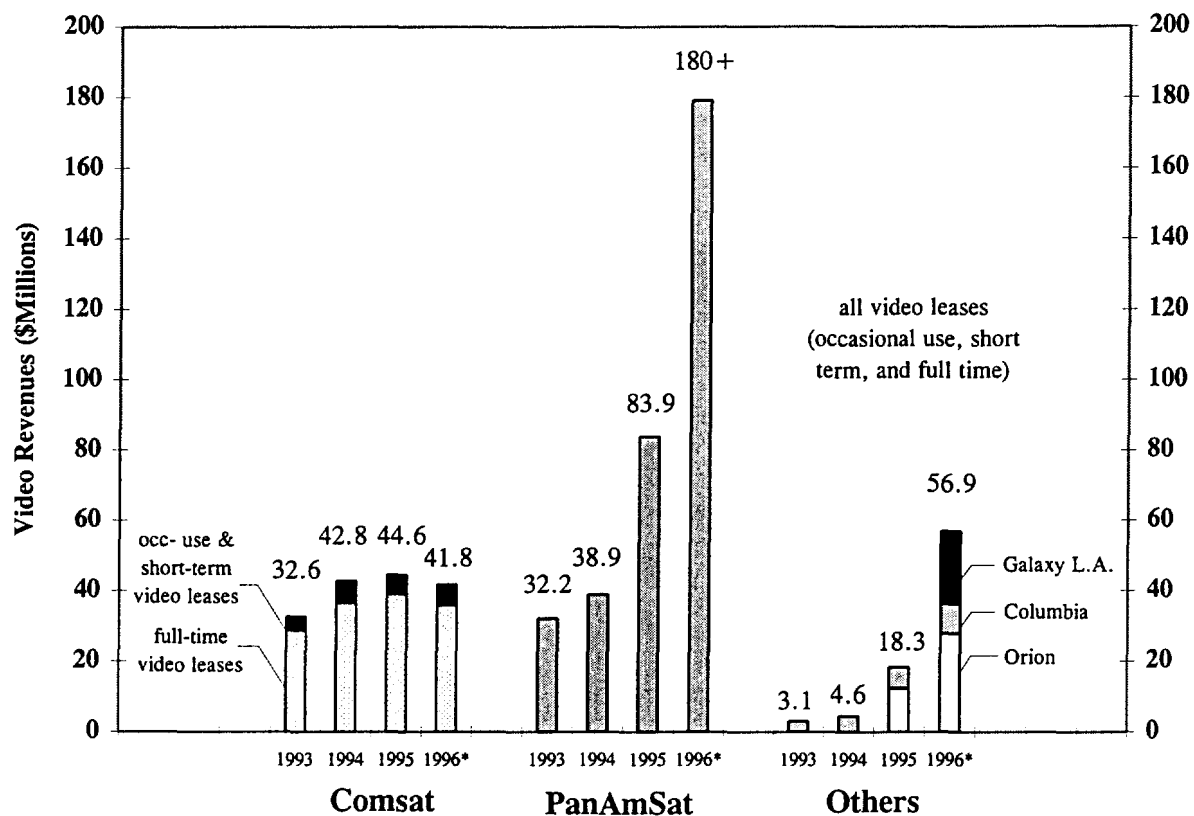
In only two years, 1994 and 1995, a world-wide total of approximately 50 new telecommunications satellites were launched, and 60 more are scheduled for launch in 1996 and 1997. Since the 1994 Study, competing global and multi-regional satellite systems have established themselves and captured a large fraction of the market for video services world-wide. These satellite systems are sizeable competitors in the transoceanic video market, given their primary focus on video (and private line) services and the fact that the majority of Intelsat capacity accessible by Comsat is designed and used for switched voice service. **Figure 1** compares the relative size of competing satellite systems by graphing total revenues for world-wide video services of Comsat, PanAmSat, and three other providers of transoceanic video service (Orion, Columbia, and Galaxy Latin America).

⁸ "Star Wars: In New Space Race, Companies Are Seeking Dollars From Heaven," *Wall Street Journal*, October 10, 1995, p. A1.

⁹ "Rush for Slots over Asia-Pacific sets Stage for Satellite Rule Change," *Satellite Week*, January 24, 1994.

¹⁰ "The Satellite Industry Convenes," *Via Satellite*, April 1996, p. 54.

Figure 1
Total Video Revenues for Comsat and Selected Competitors



Notes:

*1996 Estimate based on extrapolation of partial-year data.

Sources: Comsat; PanAmSat and Orion Annual Reports, SEC Forms 10-K and 10-Q; Tables PAN-5, ORI-3; and Tables COL-2 and GLA-1 using the average annual rates of \$1.2 and \$1.55 million per transponder, respectively.

PanAmSat

The recently-announced acquisition of PanAmSat by Hughes creates a new PanAmSat that, within two years, will directly own 21 satellites world-wide.¹¹ In the years prior to the announced merger, PanAmSat had rapidly grown into a leading global provider of satellite services. With the launch of PAS-1, PanAmSat instantaneously captured 50 percent of video services between the U.S. and Latin America in 1989¹² and has increased its presence since.¹³ PanAmSat achieved global coverage in 1994 and, with four satellites in orbit today, derives approximately 80 percent of its revenues from video services. Despite the 1994 launch failure of PAS-3, PanAmSat's 1995 total video revenues reached \$83.9 million world-wide and, with PAS-3R now in place, will exceed \$180 million in 1996.¹⁴ From 1989 to 1995, PanAmSat's growth in video revenues has averaged 64 percent per year.¹⁵ Prior to the merger announcement, PanAmSat had already scheduled to launch four more satellites (PAS

¹¹ "Hughes Deal for PanAmSat is Reported to be Complete," *The New York Times*, September 20, 1996, p. D1. The merger will combine Hughes' 10 existing and 3 planned (*i.e.*, scheduled for launch through 1998) Galaxy/SBS satellites with PanAmSat's 4 existing and 4 planned (*i.e.*, scheduled for launch through early 1998) satellites.

The combined company's 14 existing and 7 planned satellites compare to Intelsat's 15 station-kept and 9 inclined-orbit satellites. ("Station-kept" satellites are operated to be stationary in their orbits, while "inclined-orbit" satellites are no longer stationary in their orbits and can be used only with specially-equipped ground stations). Over the next three years Intelsat will launch six new satellites (801-806) and retire seven (502, 503, 505-507, 510, 512); a seventh new Intelsat satellite (K-TV) currently is in the proposal stage. Also note that Comsat cannot provide uplinks to Intelsat's Indian-Ocean Region (IOR) satellites.

¹² 1994 Study, p. 70.

¹³ By 1995, PanAmSat was already a leading provider of video services to the Asia-Pacific region, and *the* leading provider of video service to Latin America, Africa, and South Asia (PanAmSat, SEC Form 10-K, 1995, p. 33).

¹⁴ PanAmSat, SEC Form 10-K, 1995. PanAmSat's video revenues for the first half of 1996 were \$89.6 million (SEC Form 10-Q, 1996, second quarter). PanAmSat's total 1996 revenues are forecast to reach \$270 million ("PanAmSat's Suitors Include GE, Loral, GM's Hughes," *The Wall Street Journal*, June 14, p. B4).

¹⁵ PanAmSat's video revenues have grown from \$4.29 million in 1989 (PanAmSat, SEC Form S-1, filed May 25, 1993) to \$83.88 million in 1995 (PanAmSat, SEC Form 10-K, 1995).

5, 6, 7, 8) for 1996 and 1997,¹⁶ had received final authority to launch PAS-9, had already filed for authorization to build and launch PAS 10 and 11,¹⁷ and had stated its desire to add seven more satellites.¹⁸ Even before announcing the merger, PanAmSat's total cash flow had been forecast to grow at an average annual rate of 60 percent over the next five years,¹⁹ and PanAmSat's total market capitalization (\$3.2 billion) exceeded that of all of Comsat's businesses (\$1.9 billion) by a significant margin.²⁰ With its strong presence and customer base in North America, the merged company will gain further competitive advantage by being able to provide "one-stop shopping" for both domestic and international distribution of U.S. broadcasters' video programming.²¹ However, given that the merger has not been completed, the quantitative analyses of video services in this report still treat PanAmSat and Hughes as separate companies.

Orion Network Systems

Orion Network Systems has been successful in attracting video customers to fill a significant fraction of available transoceanic capacity on its Atlantic Ocean satellite that has been operational since the beginning of 1995. In early 1996, reportedly more than 50 percent of total capacity had been leased to full-time and occasional-use customers.²² Orion derived \$12.3 million from video services in 1995 and, for 1996, expects to reach video revenues of

¹⁶ *Space News*, August 7, 1995, p. 3. Note that PanAmSat's commercial satellite identifications differ from the numbering systems used in its FCC applications. For example, PAS-4 is the FCC designation for PAS-2, PAS-6 is the FCC designation for PAS-4, and PAS-2 is the FCC designation for PAS-3R.

¹⁷ *In the Matter of the Application of PanAmSat Licensee Corp. for Authorization to Construct, Launch and Operate a Ka-Band Separate International Communications Satellite System*, Federal Communications Commission, September 29, p. 2.

¹⁸ "PanAmSat Wants Ka-band Satellite Round Reopened," *Telecommunication Reports*, December 25, 1995, p. 29.

¹⁹ "PanAmSat's Suitors Include GE, Loral, GM's Hughes," *The Wall Street Journal*, June 14, p. B4.

²⁰ *Value Line*, July 12, 1996; *The Wall Street Journal*, Stock Price Quotes, Sept. 19, 1996; PanAmSat, SEC Form 10-K, 1995. Total market capitalization includes book value of long-term debt. Stock price of PanAmSat reflects value before announcement of merger agreement with Hughes.

²¹ Note that Comsat currently is not allowed to provide U.S. domestic satellite services, except on an *ad hoc* basis and only after obtaining prior regulatory consent.

²² "Orion Sharpens Focus on New Markets, Next Satellites," *Space News*, March 11, 1996.